

45. Apparatus for processing wire having a sheathing to sever the wire into sections and to cut the sheathing and strip it from the sections adjacent to their severed ends, comprising,

- a) a support structure;
- b) first and second pairs of endless belt conveyors mounted on said structure and axially spaced from each other;
- c) said belt conveyors in each pair comprising endless belts having parallel portions which grip opposite sides of the wire;
- d) at least one electrical conveyor drive motor connected to one of said belt conveyors in each pair selectively energizable to drive the associated belt conveyor in at least one direction;
- e) two or more blades movably supported by said structure for movement between one or more open positions in which the blades are separated from the wire and sheathing, a wire severing position in which at least two of said blades sever the wire, and a sheathing cutting position in which at least two of said blades cut the sheathing but not the wire;
- f) at least one blade actuator connected to said blades and selectively energizable to relatively move said blades between their open, wire severing, and

sheathing cutting positions; and

g) an electrical controller connected to said at least one conveyor drive motor and to said at least one blade actuator to operate them in a controlled sequence to sever the wire into sections, cut the sheathing, and strip the sheathing from the sections adjacent to their severed ends.

46. A method of processing wire having a sheathing to sever the wire thereby to form severed wire ends and to remove sheathing from each severed wire end, the method using two spaced apart pairs of endless belt conveyors gripping the wire on opposite sides to impart movement selectively to the wire to feed it in a forward direction and a rearward direction, each pair of endless belt conveyors being separately driveable in the forward and rearward directions by at least one reversible conveyor motor, a blade assembly having two or more blades positioned between the spaced apart pairs of conveyors and relatively movable to sever the wire and to cut the sheathing on each severed wire end, and at least one actuator connected to the blades, the method comprising the steps of,

a) operating the endless belt conveyor pairs to position the wire for at least two of said blades to sever the wire;

b) actuating at least two of said blades to sever the wire;

c) operating at least one motor to drive the endless belt conveyor pairs, at least one pair at a time, to position the two severed wire ends axially, at least one end at a time, for at least two of said blades to cut the sheathing on the two severed wire ends, at least one end at a time;

d) actuating at least two of said blades to cut the sheathing on the two severed wire ends, at least one end at a time; and

e) operating at least one motor to drive the endless belt conveyor pairs, at least one pair at a time, to move the two severed wire ends axially, at least one end at a time, so that the blades that cut the sheathing strip the cut sheathing from each severed wire end, at least one end at a time.

47. A method of displacing wire having a sheathing to position the wire for the wire to be severed, thereby to form severed wire ends, to position the severed wire ends for the sheathing on each severed wire end to be cut, and to move the severed wire ends to remove the cut sheathing from each severed wire end, the method using two spaced apart pairs of endless belt conveyors gripping the wire on opposite sides to impart movement selectively to the wire to feed it in a forward direction and a rearward direction, each pair of endless belt conveyors being separately driveable in the forward and rearward directions by at least one reversible conveyor motor, a blade assembly having two or more blades positioned between the spaced apart pairs of conveyors and relatively movable to sever the wire and to cut the sheathing on each severed wire end, and at least one actuator connected to the blades, the method comprising the steps of,

- a) operating at least one motor to drive at least one pair of said conveyors to position the wire for at least two of said blades to sever the wire;
- b) operating at least one motor to drive the endless belt conveyor pairs, at least one pair at a time, to position the two severed wire ends axially, at least one end at a time, for at least two of said

blades to cut the sheathing on the two severed wire ends, at least one end at a time; and

c) operating at least one motor to drive the endless belt conveyor pairs, at least one pair at a time, to move the two severed wire ends axially, at least one end at a time, so that at least two of said blades strip the cut sheathing from each severed wire end, at least one end at a time.

48. A method of severing wire having a sheathing into sections of predetermined wire length with each severed wire section having a severed wire end, and removing a predetermined strip length of sheathing from each severed wire end, the method using two spaced apart pairs of endless belt conveyors, a forward endless belt conveyor pair and a rearward endless belt conveyor pair, gripping the wire on opposite sides to impart movement selectively to the wire to feed it in a forward direction and a rearward direction, each pair of endless belt conveyors being separately driveable in the forward and rearward directions by at least one reversible conveyor motor, at least one of the endless belt conveyor pairs being positioned to feed the wire in a forward direction from

a wire supply source, a blade assembly having two or more blades positioned between the spaced apart pairs of conveyors and relatively movable to sever the wire and to cut the sheathing on each severed wire end, and at least one actuator connected to the blades, the method comprising the steps of,

- a) operating at least one conveyor motor to drive at least one of the endless belt conveyor pairs to feed the wire from the wire supply source in a forward direction through one of the endless belt conveyor pairs, the blade assembly, and into the other endless belt conveyor pair until the distance from the blades to the free end of the wire equals the predetermined wire length;
- b) actuating at least two of said blades to sever the wire to thereby create two wire sections including a forward severed wire section and a rearward severed wire section;
- c) relatively retracting the blades after they sever the wire;
- d) operating one of said endless belt conveyor pairs to move one of said severed wire sections axially so that the distance from the blades to the severed end of said one of said severed wire sections equals the predetermined sheathing strip

length;

e) actuating at least two of said blades to cut the sheathing on the severed end of said one of said severed wire sections;

f) operating said one of said endless belt conveyor pairs to move said one of said severed wire sections so as to pull the severed end of said one of said severed wire sections between at least two of said blades so that the blades strip the cut sheathing from the severed end of said one of said severed wire sections;

g) relatively retracting the blades after the cut sheathing has been stripped from the severed end of said one of said severed wire sections;

h) operating the other of said endless belt conveyor pairs to move the other of said severed wire sections axially so that the distance from the blades to the severed end of said other of said severed wire sections equals the predetermined sheathing strip length;

i) actuating at least two of said blades to cut the sheathing on the severed end of said other of said severed wire sections;

j) operating said other of said endless belt conveyor pairs to move said other of said severed

wire sections so as to pull the severed end of said other of said severed wire sections between at least two of said blades so that the blades strip the cut sheathing from the severed end of said other of said severed wire sections;

- k) relatively retracting the blades after the cut sheathing has been stripped from the severed end of said other of said severed wire sections; and
- l) operating the forward endless belt conveyor pair in a forward direction to expel the forward severed wire section.

49. A method of severing wire having a sheathing into sections of predetermined wire length with each severed wire section having a severed wire end, and removing sheathing from each severed wire end, the method using two spaced apart pairs of endless belt conveyors, a forward endless belt conveyor pair and a rearward endless belt conveyor pair, gripping the wire on opposite sides to impart movement selectively to the wire to feed it in a forward direction and a rearward direction, each pair of endless belt conveyors being separately driveable in the forward and rearward directions by at least one reversible conveyor motor, at least one of the endless belt conveyor pairs being

positioned to feed the wire in a forward direction from a wire supply source, a blade assembly having two or more blades positioned between the spaced apart pairs of conveyors and relatively movable to sever the wire and to cut the sheathing on each severed wire end, and at least one actuator connected to the blades, the method comprising the steps of,

a) operating at least one conveyor motor to drive at least one of the endless belt conveyor pairs to feed the wire from the wire supply source in a forward direction through one of the endless belt conveyor pairs, the blade assembly, and into the other endless belt conveyor pair until the distance from the blades to the free end of the wire equals the predetermined wire length;

b) actuating at least two of said blades to sever the wire to thereby create two wire sections including a forward severed wire section and a rearward severed wire section;

c) relatively retracting the blades after they sever the wire;

d) operating one of said endless belt conveyor pairs to move one of said severed wire sections axially into position for at least two of said blades to cut the sheathing on its severed end;

e) actuating at least two of said blades to cut the sheathing on the severed end of said one of said severed wire sections;

f) operating said one of said endless belt conveyor pairs to move said one of said severed wire sections so as to pull the severed end of said one of said severed wire sections between at least two of said blades so that the blades strip the cut sheathing from the severed end of said one of said severed wire sections;

g) relatively retracting the blades after the cut sheathing has been stripped from the severed end of said one of said severed wire sections;

h) operating the other of said endless belt conveyor pairs to move the other of said severed wire sections axially into position for at least two of said blades to cut the sheathing on its severed end;

i) actuating at least two of said blades to cut the sheathing on the severed end of said other of said severed wire sections;

j) operating said other of said endless belt conveyor pairs to move said other of said severed wire sections so as to pull the severed end of said other of said severed wire sections between at least two of said blades so that the blades strip the cut

sheathing from the severed end of said other of said severed wire sections;

k) relatively retracting the blades after the cut sheathing has been stripped from the severed end of said other of said severed wire sections; and

1) operating the forward endless belt conveyor pair in a forward direction to expel the forward severed wire section.

50. A method of severing wire having a sheathing into sections of predetermined wire length with each severed wire section having a severed wire end, and removing a predetermined strip length of sheathing from each severed wire end, the method using two spaced apart pairs of endless belt conveyors, a forward endless belt conveyor pair and a rearward endless belt conveyor pair, gripping the wire on opposite sides to impart movement selectively to the wire to feed it in a forward direction and a rearward direction, each pair of endless belt conveyors being separately driveable in the forward and rearward directions by at least one reversible conveyor motor, at least one of the endless belt conveyor pairs being positioned to feed the wire in a forward direction from

a wire supply source, a blade assembly having two or more blades positioned between the spaced apart pairs of conveyors and relatively movable to sever the wire and to cut the sheathing on each severed wire end, and at least one actuator connected to the blades, the method comprising the steps of,

- a) operating at least one conveyor motor to drive at least one of the conveyor pairs to feed the wire from the wire supply source in a forward direction through one of the endless belt conveyor pairs, the blade assembly, and into the other endless belt conveyor pair until the distance from the blades to the free end of the wire equals the predetermined wire length;
- b) actuating at least two of said blades to sever the wire to thereby create two wire sections including a forward severed wire section and a rearward severed wire section;
- c) relatively retracting said at least two of the blades after they sever the wire;
- d) operating at least one motor to drive one of said endless belt conveyor pairs to move one of said severed wire sections axially;
- e) actuating at least two of said blades to cut the sheathing on the severed end of said one of

said severed wire sections that has been moved axially, thereby to establish a distance from the blades cutting the sheathing to the severed end of said one of said severed wire sections whereby said distance equals the predetermined sheathing strip length;

f) operating at least one motor to drive said one of said endless belt conveyor pairs to move said one of said severed wire sections so as to pull the severed end of said one of said severed wire sections between at least two of said blades so that the blades strip the cut sheathing from the severed end of said one of said severed wire sections;

g) relatively retracting the blades after the cut sheathing has been stripped from the severed end of said one of said severed wire sections;

h) operating at least one motor to drive the other of said endless belt conveyor pairs to move the other of said severed sections axially;

i) actuating at least two of said blades to cut the sheathing on the severed end of said other of said severed wire sections that has been moved axially, thereby to establish a distance from the blades cutting the sheathing to the severed end of said other of said severed wire sections whereby said distance equals the predetermined sheathing strip length;

j) operating at least one motor to drive said other of said endless belt conveyor pairs to move said other of said severed wire sections so as to pull the severed end of said other of said severed wire sections between at least two of said blades so that the blades strip the cut sheathing from the severed end of said other of said severed wire sections;

k) relatively retracting the blades after the cut sheathing has been stripped from the severed end of said other of said severed wire sections; and

l) operating the forward endless belt conveyor pair in a forward direction to expel the forward severed wire section.

51. The method of claim 48 including also removing a predetermined length of sheathing from the end of each section opposite said severed end thereof.